From glowbugs@theporch.com Sat Nov 9 16:56:09 1996
Return-Path: <glowbugs@theporch.com>
Received: from uro (localhost.theporch.com [127.0.0.1]) by uro.theporch.com
(8.8.2/AUX-3.1.1) with SMTP id QAA05497; Sat, 9 Nov 1996 16:51:11 -0600 (CST)
Date: Sat, 9 Nov 1996 16:51:11 -0600 (CST)
Message-Id: <199611092251.QAA05497@uro.theporch.com>
Errors-To: conard@tntech.campus.mci.net
Reply-To: glowbugs@theporch.com
Originator: glowbugs@theporch.com
Sender: glowbugs@theporch.com
Precedence: bulk
From: glowbugs@theporch.com
To: Multiple recipients of list <glowbugs@theporch.com>
Subject: GLOWBUGS digest 347
X-Listprocessor-Version: 6.0c -- ListProcessor by Anastasios Kotsikonas
X-Comment: Please send list server requests to listproc@theporch.com
Status: O

GLOWBUGS Digest 347

Topics covered in this issue include:

Date: Fri, 8 Nov 1996 14:43:04 +0000
From: "Brian Carling" <bry@mail1.mnsinc.com>
To: glowbugs@theporch.com
Subject: Tubes on PC boards!
Message-ID: <199611082241.RAA05670@user2.mnsinc.com>

This is amusing...
After making remarks on here about the inadvisability of putting
tubes on a PC board, I have discovered that I possess a BA that is
MADE that way!!!

I finally took some time to re-arrange the shack / office / lab
today, and thus created some table top space. Put the WRL Duoblaster
84 up on the table and whipped the cover off to see if I could put
one of the two sweep tube finals back in its socket - it had leaped
out during shipping across country from Eugene Rippen's BA Candy Store
to my QTH by UPS!

Well, what do my eyes behold in there? CIRCUIT BOARDS! Brown,
single-sided 1960s style circuit boards with GULP - *TUBES* mounted
on them!

There are 7 bottles plus the two sweepers which LOOK like they are 6HF5s.
One has a floppy plate cap. Should use epoxy to steady it? Or
something else?

The other bottles are: 6JV8 (try finding a spare one of THOSE!!),
6GY6 - where did they come up with such odd tubes? A couple of
12BA6es in what looks lke the i.f. amp strip - ok
those are more familiar! 6HG8 = ECF86 - OK I know that too but it's
been a LONG time ago! A 6EJ7 with the funny looking shield inside
it.. and finally a 12 BY7A / 12DQ7 driver bottle.

Should be fun trying to resurrect this beast. I will probably replace
the elctrolytics at least before applying any power to it.

Anyone else running one of these beasts or anything similar?

It looks like it is clean, and reasonably well constructed for a rig
that sold NEW for $150.00 ! !

73 de Bry

****
*** 73 from Radio AF4K / G3XLQ in Gaithersburg, MD USA *
** E-mail to: bry@mnsinc.com   *
*** See the great ham radio resources at: *
** http://www.mnsinc.com/bry/   *
****

Date: Fri, 8 Nov 1996 16:00:17 -0700 (MST)
From: toyboat@freenet.edmonton.ab.ca
To: Deane D McIntyre <dmcintyr@acs.ucalgary.ca>
Cc: Multiple recipients of list <glowbugs@theporch.com>
Subject: Re: Thought for junkotvscrappo tubes
Message-ID: <Pine.A41.3.95.961108155233.64358B-100000@fn2.freenet.edmonton.ab.ca>

> What about having all three triodes in one bottle, such as used in
> some colour TV tubes?
>
> Some types that should work are 6C10 6D10 6AC10 6AK10 6U10 8AC10
> and so forth. All are compactrons I think with seperate cathodes
> for each triode.
>
> Anyone done this?
>
> 73, Deane D McIntyre VE6BPO
> dmcintyr@acs.ucalgary.ca

  Hello,

  Popular Electronics of January, 1963. 6AF11 used for 3 stage regen.

  Detector-audio-audio = triode-triode-pentode.

  Haven't built, but good armchair wish-project :-).

  Shane

Date: Fri, 8 Nov 1996 16:34:14 -0700
From: jeffd@coriolis.com (Jeff Duntemann)
To: bry@mail1.mnsinc.com
Cc: glowbugs@theporch.com
Subject: Re: Tubes on PC boards!
Message-ID: <1.5.4.32.19961108163003.00f1dcdc@ntserver.coriolis.com>

At 05:00 PM 11/8/96 -0600, you wrote:

>There are 7 bottles plus the two sweepers which LOOK like they are 6HF5s.
>One has a floppy plate cap. Should use epoxy to steady it? Or
>something else?

Save it if you can unless it turns up bad, since it's tougher to get a matched pair of obscure sweep tubes than 6146's or 811A's. I'm not sure what sort of glue would be good there, since it will be under a LOT of heat stress, and not much grabs at glass worth a damn.

Also, be careful with neutralization if you have to change finals. (You probably will.) I built a sweep tube linear with 4 6HF5s and I never really got it to settle down, especially on the higher HF bands. (It was the Shoebox II linear, by John Schultz, from a 1967 issue of CQ.) That particular tube is *very* flighty, and one reason I doubt I'll use sweep tubes again in linear service.

Good luck with it.

--73--

--Jeff Duntemann KG7JF
  Scottsdale, Arizona

Date: Fri, 8 Nov 1996 19:09:32 -0500
From: W4AOS@aol.com
To: lee@radioadv.com
Subject: Re: 6BM8 update
Message-ID: <961108190932_224185432@emout07.mail.aol.com>

In a message dated 96-11-06 21:47:54 EST, you write:

<< Since my
 voltage drops to about 260, it turns out that the screen
 voltage is only 100 volts key down. Thinks I, reduce the
 screen resistor a little to get the screen voltage back up
 to the 200 volt region, hence increasing input (and of
 course output). >>

Lee there is a fundamental problem with tetrodes and to some extent, I think, with pentodes as well, in that during the rf cycle, when the plate voltage swings below the screen voltage, the screen starts drawing a lot of current, reducing that which gets to the plate, lowering overall efficiency. With the plate voltage set at 250 and the screen at 200 there is not much room for the plate voltage to swing down before it is lower than the screen. I believe that this may be the fundamental cause of the behaviour you have observed. I don't have a set of characteristic curves for your tube, so can't say for sure. Anyway, lacking a set of curves, the best way to set an operating point is to cut and try as you are doing.

Good luck Bob w4aos@aol.com

Date: Fri, 8 Nov 1996 17:20:46 -0700 (MST)
From: "James P. Rybak" <jrybak@mesa5.Mesa.Colorado.EDU>
To: Glowbugs <glowbugs@theporch.com>
Subject: Differences in TV-7 Tube Testers????
Message-ID: <Pine.SV4.3.91.961108164821.583A-100000@mesa5.mesa.colorado.edu>

Can anyone tell me the differences in the TV-7 series of military tube testers?

Thanks.

Jim Rybak W0KSD

Date: Sat, 09 Nov 96 12:31:45 AES
From: kellymed@tmxbris.mhs.oz.au (Murray Kelly)
To: glowbugs@theporch.com
Subject: ecl86 et al.
Message-ID: <236@tmxbris.mhs.oz.au>

From: "Brian Carling" <bry@mail1.mnsinc.com>
Subject: Re: Re[2]: UY227, and other tubes for regen service

Yup, the ECL86 is the 6GW8. Bit like the 6BM8 but 10W plate
insted of 8W. Some of us been trying to get a bit of something
going with these tubes.

Murray


```
*****************************************************************
*      Murray Kelly vk4aok      mkelly@tmxbris.mhs.oz.au         *
*      29 Molonga Ter. / Graceville/ QLD. 4075/ Australia        *
*      ph/fax Intl+ 61 7 3379 3307  mobile 018 071 355           *
*****************************************************************
```


>Is there an American equivallent for the ECL86 triode=pentode?
>I just acquired two of them and they look like they would make a
>dandy miniature 5-10 watt CW xmtr.


```
>*******************************************************
>*** 73 from Radio AF4K / G3XLQ in Gaithersburg, MD USA *
>**  E-mail to:  bry@mnsinc.com                         *
>*** See the great ham radio resources at:              *
>**  http://www.mnsinc.com/bry/                         *
>*******************************************************
```

Date: Fri, 8 Nov 1996 22:36:53 +0000
From: kemkerj@xyzzy.net
To: glowbugs@theporch.com
Subject: Re: World Radio Labs
Message-ID: <9611090339.AA25143@ponyxprs.atlanta.med.va.gov>

>
> Make sure you're on a frequency where other AMers hang out, or nobody will
> be able to understand you. 6M is mostly dead these days. Try 52.525
> simplex. Ask around and see where the AM activity (if any) happens. There's
> often an "old timers" net on the weekends. If you're in central Arizona let
> me know; I'll fire up my Gonset and we'll do like they wuz doing in 1963...
>
> --73--
>
> --Jeff Duntemann KG7JF
>   Scottsdale, Arizona
>
>

I've been told that 50.4Mhz. is the AM hang-out for Atlanta, but I'll
try 52.525 as well.

When I got the variac up to 70VAC, the capacitor crapped out on me. Started bubbling and hissing like an ill-tempered tea-kettle. It leaked some sort of foul liquid out on the top of the cabinet. Upon removing the capacitor, I found it marked with the following:

67C15-18
20 MFD. 450 W.V. (a symbol like a half-moon)
80 MFD. 350 W.V. (a square symbol)
100 MFD. 50 W.V. (a triangle)

The symbols and the MFD were fairly easy to decipher. The three lugs on the bottom of this can are marked with a semicircle("("), a square bracket (like "[") and an angle ("<"). They represent the 20 microfarad, 80 microfarad and the 100 microfarad capacitors, respectively. What I can't figure out is if the W.V. represents watts, volts or both as far as the power rating goes. (As a think about it more, how do I know it's not referring to millifarads rather than microfarads.) Also, I figure the 67C15-18 is the original manufacturer's part number. While I feel confident in replacing this can with two seperate (only two lugs used, 20 and 80) capacitors, how do I determine the appropriate power rating?

73 de KF4MZD, John Kemker (yes, I got it!)

Date: Fri, 8 Nov 1996 23:53:11 -0600 (CST)
From: Don Reaves <dr@cei.net>
To: kemkerj@xyzzy.net
Subject: Re: World Radio Labs
Message-ID: <Pine.LNX.3.91.961108234817.16037A-100000@kc5jh.reaves.net>

> The symbols and the MFD were fairly easy to decipher. The three lugs
> on the bottom of this can are marked with a semicircle("("), a square
> bracket (like "[") and an angle ("<"). They represent the 20
> microfarad, 80 microfarad and the 100 microfarad capacitors,
> respectively. What I can't figure out is if the W.V. represents
> watts, volts or both as far as the power rating goes. (As a think
> about it more, how do I know it's not referring to millifarads rather
> than microfarads.) Also, I figure the 67C15-18 is the original
> manufacturer's part number.

Hello John,
These are indeed microfarads, and WV refers to working voltage. In this application, I doubt you have to worry about power rating.

> how do I determine the appropriate power rating?

Electrolytics are rated at a working voltage and a surge voltage.
Use something with an equivalent WV and you will be OK.

73

Don Reaves WA5BBS   dr@cei.net
46 Arbor Oaks Drive
N. Little Rock, AR 72120

Date: Sat, 9 Nov 1996 00:22:23 -0800 (PST)
From: John Kolb <jlkolb@cts.com>
To: kemkerj@xyzzy.net
Subject: Re: World Radio Labs
Message-ID: <Pine.SCO.3.91.961109002016.14629B-100000@sd.cts.com>

On Fri, 8 Nov 1996 kemkerj@xyzzy.net wrote:

> 67C15-18
> 20 MFD. 450 W.V. (a symbol like a half-moon)
> 80 MFD. 350 W.V. (a square symbol)
> 100 MFD. 50 W.V. (a triangle)
>
>
> respectively. What I can't figure out is if the W.V. represents
> watts, volts or both as far as the power rating goes. (As a think

The W. V. stands for Working Volts. Nowadays they just label them uF
for microfarad and V for Volts.

John

Date: Sat, 09 Nov 1996 03:03:11 -0600
From: Conard Murray <conard@tntech.campus.mci.net>
To: glowbugs@theporch.com
Subject: Glowbugs Topic query
Message-ID: <1.5.4.32.19961109090311.006934b0@tntech.campus.mci.net>

Hello everyone!
I recently posted some guidelines pertaining to the topics of the GB list. I
think we need to come up with a text to place in the greeting message for

the list and I was thinking basically of using what I sent before. If you have any comments (anything I am leaving out or stuff that should be dropped) then please let me know. Below is a copy of what I sent earlier. Thanks for your input!
73 de Conard ws4s

>
>1) Building new equipment (homebrewing) with vacuum tubes.
>
>2) Discussions on vacuum tube circuitry.
>
>3) Discussions on proper building techniques.
>
>4) Wants/for sales of tubes, components or literature.
>
>5) Reports of building accomplishments and other war stories.
>
>6) Discussion of proper operating procedures and net reports.
>
>

Conard Murray WS4S NNN0UTN   Glowbugs Listowner
217 Dyer Avenue   BA/GB net 1802.5/3579.5/7050 KHz
Cookeville, Tn 38501   conard@tntech.campus.mci.net
615-526-4093   Wise men still seek Him

Date: Sat, 9 Nov 1996 04:14:18 +0000
From: "Brian Carling" <bry@mail1.mnsinc.com>
To: kemkerj@xyzzy.net, glowbugs@theporch.com
Subject: Re: World Radio Labs
Message-ID: <199611091212.HAA03930@user2.mnsinc.com>

HEY! It's a reply from AF4K!
On 8 Nov 96, kemkerj@xyzzy.net wrote:

> 20 MFD. 450 W.V. (a symbol like a half-moon)
> 80 MFD. 350 W.V. (a square symbol)
> 100 MFD. 50 W.V. (a triangle)

> What I can't figure out is if the W.V. represents
> watts, volts or both as far as the power rating goes.

Working Voltage

In other words. Don't feed this baby any more than 50, 350 and 450 volts DC!
(per section as marked)

(As a think
> about it more, how do I know it's not referring to millifarads
> rather than microfarads.)

uF = microFarads
mF technically means milliFarads, but has been used by some folks to
represent uF also! You will sometimes see nF meaning nanoFarads, in
newer designs circa 1980-1996 when it came into vogue with engineers.

>Also, I figure the 67C15-18 is the
> original manufacturer's part number.

Probably right.

>While I feel confident in
> replacing this can with two seperate (only two lugs used, 20 and 80)
> capacitors, how do I determine the appropriate power rating?

Caps don't have a power rating - just a VOLTAGE rating.

Don't pay the ridiculous asking prices for those multi-section
capacitors from the dealers. I have seen them as high as $20-30
for something like that. You can get the individual electrolytic
capacitors at a hamfest for very reasonable prices.

> 73 de KF4MZD, John Kemker (yes, I got it!)

Congratulations! See you on 6m AM one of these years if I ever get a
rig!
****
*** 73 from Radio AF4K / G3XLQ in Gaithersburg, MD USA *
** E-mail to: bry@mnsinc.com   *
*** See the great ham radio resources at: *
** http://www.mnsinc.com/bry/   *
****

Date: Sat, 9 Nov 1996 04:14:18 +0000
From: "Brian Carling" <bry@mail1.mnsinc.com>
To: rdkeys@csemail.cropsci.ncsu.edu, glowbugs@theporch.com
Subject: Re: BA/GB Net -- this weekend is a cold one (:+}}.....
Message-ID: <199611091212.HAA03933@user2.mnsinc.com>

HEY! It's a reply from AF4K!

On 8 Nov 96, rdkeys@csemail.cropsci.ncsu.e wrote:

> Well, folks, the wx bulletin indicates that it will be COOOOOLD this
> weekend in much of the North American continent. So, it oughta be
> good on the bands. Hope folks can make it sometime. I will kick me
> hind end into high gear and make sure I am there at least some of
> the time.
>
> QTR 0000Z QRG 7050KHZ

Tried last evening 0000-0100 UTC
Didn't hear anyone.
I called CQ GB and CQ BA numerous times.
No replies!

Brian, in Maryland.
****
*** 73 from Radio AF4K / G3XLQ in Gaithersburg, MD USA *
** E-mail to: bry@mnsinc.com   *
*** See the great ham radio resources at: *
** http://www.mnsinc.com/bry/   *
****

Date: Sat, 9 Nov 1996 04:19:15 +0000
From: "Brian Carling" <bry@mail1.mnsinc.com>
To: glowbugs@theporch.com
Subject: Re: Parts alert! Cheap transmitting micas!
Message-ID: <199611091217.HAA03994@user2.mnsinc.com>

HEY! It's a reply from AF4K!
On 8 Nov 96, Jeff Duntemann wrote:

> Hi gang--
>
> Flipping through the latest All Electronics catalog last night I
> stumbled across a helluva deal on transmitting mica caps. On page
> 37 they offer 7 different varieties at 4/$1.00. These look like
> (from the drawing) the Sprague and Sangamo models from WWII on.
> Values are things like .002 @ 2500V, .0035 @ 2500V, .005 @2500V, and
> so on. They have .02 @ 2000V for $1 each. Most are unused, some
> are removed from equipment.
>
> Those without the catalog should get it;

[snip]
> --73--

>
> --Jeff Duntemann KG7JF

Guys - for those who collect catalogues, you REALLY should get my
file
megalist.txt - it lists just about ALL the main suppliers of surplus
goodies in the USA and some in Canada, Australia and the U.K. too.

You can get it in the ham radio resources section on my web page.
****
*** 73 from Radio AF4K / G3XLQ in Gaithersburg, MD USA *
** E-mail to: bry@mnsinc.com   *
*** See the great ham radio resources at: *
** http://www.mnsinc.com/bry/   *
****

Date: Sat, 9 Nov 1996 09:41:00 GMT
From: ralph.hartwell@emachine.com (Ralph Hartwell)
To: glowbugs@theporch.com
Subject: Re: World Radio Labs
Message-ID: <9611090618422321@emachine.com>

K>When I got the variac up to 70VAC, the capacitor crapped out on me.
K>Started bubbling and hissing like an ill-tempered tea-kettle. It
K>leaked some sort of foul liquid out on the top of the cabinet. Upon

   Much better than having it go off like a firecracker! That's
happened here a time or two. :(

K>removing the capacitor, I found it marked with the following:

<snip>

K>The symbols and the MFD were fairly easy to decipher. The three lugs
K>on the bottom of this can are marked with a semicircle("("), a square
K>bracket (like "[") and an angle ("<"). They represent the 20
K>microfarad, 80 microfarad and the 100 microfarad capacitors,
K>respectively. What I can't figure out is if the W.V. represents
K>watts, volts or both as far as the power rating goes. (As a think

WV = Working Volts (DC). The ident marks were only used to positively
identify the various sections of the capacitor. Some of them had
greatly differing voltage ratings, such a a 450 volt and a 25 volt cap
in the same can. The case is always negative, unless it was a very
special capacitor type. Note that a cardboard (usually black)
insulating cover was slipped over those caps which had their case above

ground, such as in a negative output voltage power supply.

   These caps are rated by the continuous DC voltage they were able to withstand. Usually, they were operated at about 80% or so of that rating. Some were also marked with a peak or surge voltage, about 15-20% higher than the WV to allow for the normal power supply voltage increase at turn on before all the little glow-in-the-dark thingies started drawing plate current.

K>about it more, how do I know it's not referring to millifarads rather
K>than microfarads.) Also, I figure the 67C15-18 is the original

MicroFarads. Back then, MilliFarads was not a common tern. <G>

K>manufacturer's part number. While I feel confident in replacing this
K>can with two seperate (only two lugs used, 20 and 80) capacitors,
K>how do I determine the appropriate power rating?

  I think it's a Mallory part number, if memory serves correctly. Just make sure the replacement components have a high enough voltage rating to handle that inital voltage. The specs on the capacitors you are going to use will usually tell you the surge voltage allowed on the new caps.

   Ralph W5JGV

 ¸ QMPro 1.53 ¸ A PC takes the guesswork out of it. So does a bikini.

Date: Sat, 9 Nov 1996 10:06:21 -0500 (EST)
From: jlevro@shore.net (John Levreault)
To: rdkeys@csemail.cropsci.ncsu.edu
Cc: glowbugs@theporch.com
Subject: Re: UY227, and other tubes for regen service
Message-ID: <199611091506.KAA10270@relay1.shore.net>

Bob-

>What would be nice is to resonate the thing in such a way that the output
>is tuned to the desired audio note (500-700hz or so) and then coupled out
>with the minimal capacitive loading to the next stage or the tin cans for
>reasonable output. In the old days, it was tuned or peaked audio transformers
>that folks liked to use. Those are scarce, but it should be possible to
>properly tune or peak a transformer or inductive coupler to do the same
>thing.
>

I've thought about this. It doesn't take much capacitance, like around .0068uf, to parallel-resonate with a 10H choke at around 600Hz, well, 610 actually. This could be placed from the plate of the amplifying tube to ground.

>> The C-R is similar, being -3dB where the reactance of the cap equals the
>> grid resistor of the next stage. Keep that R big so's not to load down the
>> detector, and a small cap will do quite well there.
>
>On the fones, it is set at 2K or 1K depending upon whose fones you use.
>I figured there would be a point where the coupling would increase and then
>peak and then not change or actually go down some as it became loaded.
>In the range of 0.25 to 10uf, that did not happen. It just stayed flat.
>

Interesting. I wonder if phones are like speakers, that is that they have a big resonant peak in their impedance. With a speaker, the mechanical resonance may cause an impedance peak as much as 10-20 times higher than their DC resistance. I've been using Walk-Person type phones, so I don't know how the old tin cans behave. Have to find me a pair of the old tin cans. When I think about what I threw away when I was younger....

There is a very simple way to measure a transducer's impedance vs. frequency. Basically, you drive the [in this case] phones from an audio signal generator through a series resistor, say 20-50K. You then measure the voltage at the phones themselves. As their impedance goes up and down, the voltage measured after the resistor will do the same. The impedance can then be calculated from voltage-divider relationships.

>I need to test it using a higher impedance tube like a 6SK7 or such and
>see how that compares in output to the 6J5. My guess is that the 6J5
>will handle the lower voltages better. What I want to do is to generate
>some real data and plot it for comparisons for folks to see. That can
>probably be simulated or generated from various functions, but I wanted
>to go through the motions for a typical lowendian regen audio stage.
>

According to the curves on the 6SJ7, it appears to start behaving like a pentode at fairly low plate voltages. The "triode region", i.e. the ib vs. ep curve for ec1=0, goes from about 8V at 2ma to 20V at 5.5ma. At the normal 3ma operating point, ep=12V! Methinks this might work rather well off a 20-30V supply. Furthermore, when you run a true pentode into a low-Z load, their gain will be basically gm*RL, that is proportional to the load impedance. From the above, the gain should actually peak at the resonant frequency of the phones. This may be a good thing. The low plate impedance of the triode will tend to damp the phones' mechanical resonance, giving a "flatter" frequency response.

>> Have your eyes glazed over yet from all the technobabble?

>
>Well, I have to think a bit when technobabble arrives.....(:+}}, and
>sometimes scurry back to the books, since I am not an electronics engineer
>type but a seat of the pants type.
>

Any good engineer knows that their pants' seat is more important than any
book-larnin'.

73 de NB1I
John Levreault

Date: Sat, 9 Nov 1996 15:12:33 -0500
From: lee@radioadv.com (Lee Richey)
To: "Multiple recipients of list" <glowbugs@theporch.com>
Subject: Re: 6GW8
Message-ID: <19961109201500460.AAB230@lee.radioadv.com>

>
>   6GW8 Eh? There is a very nice little 6GW8 MOPA rig in QST, February,
>   1966 called the "Mighty Midget" by Lewis McCoy.
>
>   Shane

That article gives me an idea for the power supply for my 6BM8 TX. In the
early '60's I worked at Sherwood Electronic Labs in Chicago where we
manufactured high quality stereo hi-fidelity equipment. We always used
a voltage doubler supply like the one in the "Mighty Midget" project. As I
recall, the doublers were pretty good on regulation. Of course, the load
current did not change as much on the hi-fi amps as it would on a keyed
TX. Hmm... Now where can I find a transformer???????

-Lee-

http://www.radioadv.com

Date: Sat, 9 Nov 1996 13:53:21 -0500
From: lee@radioadv.com (Lee Richey)
To: <W4AOS@aol.com>, "Multiple recipients of list" <glowbugs@theporch.com>
Subject: Re: 6BM8 update
Message-ID: <19961109201500460.AAA230@lee.radioadv.com>

>
> <<   Since my
> voltage drops to about 260, it turns out that the screen
> voltage is only 100 volts key down. Thinks I, reduce the
> screen resistor a little to get the screen voltage back up
> to the 200 volt region, hence increasing input (and of
> course output). >>

Bob wrote:

> Lee there is a fundamental problem with tetrodes and to some extent, I
> think, with pentodes as well, in that during the rf cycle, when the plate
> voltage swings below the screen voltage, the screen starts drawing a lot
of
> current, reducing that which gets to the plate, lowering overall
efficiency.

I think you're right. Now that you mention it, I remember reading about
this effect some time ago. That also fits my experience.

I decided to leave the screen resistor at 20K since the output was adequate
and the effeciency is pretty good. The other thing is that it is almost
impossible to damage the 6BM8 with the 20K resistor in the screen. So,
I'm gonna leave the screen resistor alone and focus on the power supply.

End of GLOWBUGS Digest 347
****